Bertsch said a primary focus now in bringing HCS to life is automating learning capabilities in the schoolhouses. He concedes that the Navy will never and should never totally get away from having instructors and facilitators, but points out that shaping training into a "reusable format" that can be launched through an Integrated Learning Environment (ILE) is beneficial to both Sailors and the taxpayers who support them.

"In an ILE, Sailors have a far broader access and don't have to be temporarily detailed or delayed en route to their units as much," he said. "This saves the Navy and taxpayers money and also takes some of the burden off the back of Sailors. Sailors can move at their own pace, and those who take initiative can shine. That is what HCS is all about: Putting the right Sailors in the right place at the right time."

Bertsch said they are also starting to align other systems to integrate with the 5VM. The Job Advertising and Selection System (JASS), once aligned, will allow Sailors to move seamlessly between the 5VM (the resume) and the available billets the detailer offers so they can have more choice as to where they go in the future.

Future counseling tools that are now in the works will integrate with Fleet Readiness Programs (FRP), such as the TYCOM Readiness Management System (TRMS), enabling Sailors to see where they fit into the larger picture. There are also plans for HCS to integrate with Resources in Distance Learning (RIDE) and the Joint Operational Information Network. Each of these initiatives will proceed with the objective of giving the Sailor as many options as possible in his or her career.

Rondeau sees HCS as a personification of the CNO's covenant to provide Sailors with every opportunity to make the most of their careers. "The more we can provide Sailors choice and the capability to make decisions at the lowest level for their personal development, the better off the Navy is going to be," Rondeau said.

"The Human Capital Strategy will provide a means by which Sailors take charge for their own careers, as well as their personal and professional development. It is the means by which we tie end-to-end Sailor capacity with strategic and tactical implications of Sea Power 21. It will allow us to link acquisition, force architecture and human systems integration with training and skills architecture. It will give our servicemembers the power to become the best possible Sailor, leader, technical expert or even parent or whatever that Sailor wishes to excel in," Rondeau said.

For more information on the Human Capital Strategy and the 5VM, visit Navy Knowledge Online at https://www.nko.navy.mil/. For more information about the Naval Personnel Development Command, Sea Warrior and the Revolution in Navy Training, go to NPDC's Web site at https://www.npdc.navy.mil/.



Naval Network Warfare Command (NETWARCOM) is leading a revolution in the way the Navy and Marine Corps will fight and operate. As Navy's operational type commander for global C4 (command, control, computers and communications), naval networks, space and information operations, NETWARCOM spearheaded the drafting of the FORCEnet Functional Concept with the Marine Corps Combat Development Command (MCCDC).

The document, signed Feb. 7 by the Chief of Naval Operations and Commandant of the Marine Corps, focuses on exploiting the power of networking decision-makers at all levels, from an individual in the field to a command headquarters, giving naval forces the speed and agility to dramatically improve overall combat effectiveness and mission accomplishment.

The Functional Concept is viewed as a critical step in delivering fast and agile Naval Forces for the future. It sets in motion a new era for Navy and Marine Corps operations, one where networks will move and share information to provide unprecedented situational awareness, firepower and seamless alignment with joint and coalition forces. The functional concept identifies 15 capabilities which the Navy and Marine Corps will use to build the supporting architecture, doctrine, organization, training and supporting systems for FORCEnet. The concept serves as the naval command and control component of Sea Power 21 and expeditionary warfare. Specifically, the FORCEnet Functional Concept:

- Supports Navy leadership's demand for speed and agility to implement the Services' future warfighting visions;
- Outlines enterprise-wide systems and processes supporting the Sea Power 21 warfighting pillars: Sea Shield, Sea Strike and Sea Basing as well as the Sea Power 21 enabling processes: Sea Warrior, Sea Trial and Sea Enterprise;
- Enhances alignment of a FORCEnet operational fleet-centered perspective with acquisition and programmatic efforts into a coherent co-evolution of organization, processes and technology;
- Accelerates fleet implementation of FORCEnet capabilities for command and control through requirements development and experimentation;

- Aligns enterprise business processes with fleet readiness;
- Ensures the Navy and Marine Corps operations are consistent with Joint Vision 2020, Joint Operating Concept, and Joint Battle Management Command and Control; and
- Empowers our Sailors and Marines by providing unprecedented operational agility accelerating the pace of combat through speed of maneuver and increased range of engagement.

The FORCEnet Functional Concept was developed under the Joint Capabilities Integration and Development System (JCIDS) process; derived directly from the Naval Operating Concept (2015-2020) for Joint Operations. It fully supports the Department of the Navy vision of Naval Power 21 and the supporting strategies of Sea Power 21 and Marine Corps Strategy 21.

Commanders will use FORCEnet "infostructure" to make the best possible decisions faster, according to the concept's operational definition. Infostructure is the fusion of information and C4 systems, supported by enterprise-wide doctrine, organization, training, material, leader development, personnel and facilities (DOTMLP-F).

"Enterprise-wide refers to not just the 'trigger pullers' within the Navy and Marine Corps, but also other aspects of the naval force and throughout the Services," said Capt. Rick Simon, deputy director for FORCEnet at NETWARCOM, headquartered in Norfolk, Va.

"I'm talking supply, medical, meteorology, etc., ... all those things that support the warrior pulling the trigger. Additionally, it directly relates to how naval forces will 'plug into' and share information with coalition and joint partners," said Simon.

FORCEnet will accelerate command and control (C2) capabilities by changing the way information moves. FORCEnet will improve the performance of the OODA (oo-DAH) Loop, Observe, Orient, Decide and Act, through shared situational awareness and feedback, decentralized command and a collaborative approach to problem-solving that opens new ways for the commander's intent to be executed.

FORCEnet creates opportunities for commanders by providing them with processed, timely, actionable information — knowledge, not just data. Better processing of available data to provide time-sensitive information will allow the commander to know where to put his carrier strike group, or better yet, where not to. "If you're approaching a bad guy's coast and he's got subs, you're going to want to know more about those areas so you can better plan where the enemy might be hiding," Simon noted.

"With FORCEnet capabilities, you'll be able to steer your strike group away from those places where subs could be and keep your ships out of danger, or you may be able to go on the offensive when the enemy least expects it and from a direction he least anticipates. FORCEnet should allow the commander to choose the terms of the engagement and to do it in such a way that the enemy cannot tolerate our actions," said Simon.

FORCEnet will also use future technology to allow a smaller, more efficient Navy to meet national security objectives. FORCEnet will permit a smaller Navy to conduct more efficient use of its intelligence, surveillance and reconnaissance (ISR) working with its Air Force and Army equivalents: C2 Constellation and Land-WarNet, respectively.

A major issue the Navy faces today is that the information-gathering ability of sensors is evolving faster than the network's ability to carry the information to the warfighter. FORCEnet will enhance the Navy's situational awareness by enabling improved ISR through an increased data-carrying capacity of naval networks so the networks can "catch up" to the capacity of everevolving sensors. The increased capacity will, in turn, allow users in the fleet to reach-back to analysts who can interpret the data.

FORCEnet will ensure naval networks are built with compatible components used by the other Services to allow seamless interaction between all the branches, as well as with the Global Information Grid (GIG), the much larger-scale network run by the Department of Defense. FORCEnet is the naval component of the GIG, which will be connected to the more than 160 major military installations worldwide. According to Simon, FORCEnet is born joint. "It's meant to be interoperable with the GIG. It's meant to share the same protocols, backbone, satellites and bandwidth expansion as the other Services. In fact, all of the architecture we're developing is being integrated into the joint vision."

FORCEnet will allow commanders as well as individual units to fully exploit the GIG. "We're at the crossroads, the merger of all aspects of FORCEnet," explained Vice Adm. James D. McArthur, NETWARCOM commander. "Success will require aligning the systems, the processes, the acquisition, the programmatics and the experimentation needed to bring speed to capability."

The FORCEnet Functional Concept takes aim at the years 2015-2020. 2020 is the target point for all the Services to be interoperable and compliant with Joint Vision 2020, which is the Joint Staff's strategic direction for achieving joint force full-spectrum dominance using a smaller, faster, smarter and more lethal military service. By choosing this time frame, the functional concept aims to field FORCEnet capabilities past the current Planning/Programming/Budgeting/Execution process, yet be close enough to allow industry an objective to build toward.

FORCEnet is the naval component of Joint C2 and expeditionary warfare. FORCEnet is also the business component of the Naval Enterprise Network. Supporting the warfighter must include the business element of logistics and shore infrastructure. Agile business operations require robust knowledge management and information. Net-centric operations include forward and home-based support. FORCEnet will facilitate the best possible decisions, and will use future technology to allow a smaller, more efficient Navy to meet national security objectives.

For additional information on the FORCEnet Functional Concept, contact the Naval Network Warfare Command Public Affairs Office at (757) 417-6796 or visit the FORCEnet Web site at http://forcenet.navy.mil/.